

IN THE CLAIMS

1. (Currently amended) A process for producing shaped bodies, in particular cores, molds and feeders in foundry technology, which comprises the following steps:

~~a. Preparation of~~ preparing a composition comprising ~~blending~~ i. at least one a phenolic resin in solid form, ~~ii. at least one~~ a polyisocyanate, and ~~iii. at least one~~ a refractory material,

~~with the composition being prepared at a temperature which is below the melting point of the at least one phenolic resin;~~

~~b. Molding of~~ the composition to form a shaped body;
and

~~c. Raising of~~ the temperature of the ~~composition~~ shaped body to above the melting point of the ~~at least one phenolic resin to cure the mixture composition.~~

2. (Currently amended) The process as claimed in claim 1, wherein the ~~at least one refractory material is firstly mixed with the phenolic resin, in particular the at least one refractory material is coated with the phenolic resin,~~ to give produce a mixture of ~~solid refractory material and~~

~~phenolic resin from which the composition is subsequently prepared by prior to addition of the at least one polyisocyanate.~~

3. (Currently amended) ~~The process as claimed in of claim 1 or 2,~~ wherein the molding to form a shaped body is carried out in a heated tool.

4. (Currently amended) ~~The process as claimed in any of the preceding claims of claim 1,~~ wherein the at least one refractory material is selected from the group consisting of silica sand, olivine, chromite sand, zircon sand, vermiculite, synthetic mold materials such as Cerabeads ~~or and~~ microspheres and mixtures thereof.

5. (Currently amended) ~~The process as claimed in of claim 4,~~ wherein the microspheres are configured as comprise hollow microspheres, ~~preferably hollow microspheres based on aluminum silicate, in particular hollow microspheres having a high aluminum oxide content of more than about 40% by weight, or a lower aluminum oxide content of less than about 40% by weight.~~

6. (Currently amended) ~~The process as claimed in any of the preceding claims,~~ wherein the composition of claim 1,

~~further comprises comprising adding an exothermic
constituentsconstituent to the composition., in particular
at least one oxidizable metal and an oxidant.~~

7. (Currently amended) ~~The process as claimed in any of
the preceding claims~~of claim 1, wherein the production of
the shaped body is carried out without addition of a
solvent.

8. (Currently amended) ~~The process as claimed in any of
claims claim 1 to 6, wherein the at least one
polyisocyanate is dissolved in a solvent, in particular an
aromatic solvent or a fatty acid ester, in which the
phenolic resin is preferably insoluble or sparingly
soluble.~~

9. (Currently amended) ~~The process as claimed in any of
the preceding claims~~of claim 1, wherein the at least one
polyisocyanate comprises an isocyanate having at least 2,
~~in particular from 2 to 4, particularly preferably from 2
to 3,~~ isocyanate groups per molecule.

10. (Currently amended) ~~The process as claimed in any of
the preceding claims~~of claim 1, ~~characterized in that~~
wherein the at least one polyisocyanate is selected from

an aliphatic, cycloaliphatic, and/or an aromatic polyisocyanate ~~which is preferably in liquid form at room temperature and mixtures thereof.~~

11. (Currently amended) ~~The process as claimed in any of the preceding claims, characterized in that the at least one polyisocyanate comprises or is an~~ of claim 10, wherein the aromatic polyisocyanate, in particular comprises diphenylmethane diisocyanate in admixture with its higher homologues. (polymeric MDI), in particular polymeric MDI having a functionality of from 2 to 4.

12. (Currently amended) ~~The process as claimed in any of the preceding claims, characterized in that~~ of Claim 1, wherein the at least one phenolic resin comprises or is a novolak, with the melting point of the phenolic resin or novolak preferably being in the range from about 60 to 120°C, in particular from about 60 to 110°C, particularly preferably from about 60 to 100°C.

13. (Currently amended) ~~The process as claimed in any of the preceding claims, wherein~~ of claim 1 further comprising curing is carried out the shaped body at a temperature of from about 150°C to about 300°C, in particular from 170°C to 270°C, particularly preferably

~~from 180°C to 250°C.~~

14. (Currently amended) ~~The process as claimed in any of the preceding claims, of claim 13,~~ wherein curing is carried out without addition of a catalyst.

15. (Currently amended) ~~The process as claimed in any of claims 1 to 13, wherein a solid and/or liquid of claim 1, further comprising adding a catalyst is added to the mixture to accelerate curing.~~ composition.

16. (Currently amended) ~~The process as claimed in any of the preceding claims, wherein~~ of claim 1 further comprising adding a compound which lowers the melting point of the phenolic resin is added to the mixture composition.

17. (Currently amended) A shaped body, in particular a core, mold or feeder for foundry technology, ~~which is obtainable by a prepared by the process as claimed in any of claims claim 1 to 16.~~

18. (Currently amended) ~~The shaped body as claimed in claim 17~~ of claim 17 which is free of solvents ~~and/or~~ gaseous catalysts.

19. (Currently amended) A composition for producing shaped bodies, in particular cores, molds and feeders, comprising ~~at least~~

~~a.~~ a solid phenolic resin,

~~b. at least one~~ a polyisocyanate, and

~~c. at least one~~ a refractory material.

20. (Currently amended) The composition ~~as claimed in~~ of claim 19, characterized in that the refractory material comprises hollow microspheres, ~~preferably hollow microspheres based on aluminum silicate, in particular hollow microspheres having a high aluminum oxide content of more than about 40% by weight, or a lower aluminum oxide content of from about 28 to 33% by weight.~~

21. (Currently amended) The composition ~~as claimed in~~ of claim 19 ~~or 20~~, wherein no solvent for ~~the at least one~~ either the phenolic resin and/or ~~no solvent for the at least one~~ polyisocyanate is present, ~~and in particular no solvent at all is present.~~

22. (Currently amended) The composition ~~as claimed in any~~ of claims 19 ~~to 21~~, wherein the ~~at least one~~ phenolic resin comprises ~~or is~~ a novolak, ~~with the melting point~~

~~of the phenolic resin or novolak preferably being in the range from about 60 to 120°C, in particular from about 60 to 110°C, particularly preferably from about 60 to 100°C.~~

23. (New) The process of claim 1, wherein the refractory material is coated with the phenolic resin prior to the addition of the polyisocyanate.

24. (New) The process of claim 4, wherein the hollow microspheres comprise aluminum silicate.

25. (New) The process of claim 4, wherein the hollow microspheres have an aluminum oxide content greater than about 40% by weight.

26. (New) The process of claim 4, wherein the hollow microspheres have an aluminum oxide content less than about 40% by weight.

27. (New) The process of claim 6, wherein the exothermic constituent is selective from an oxidizable metal, an oxidant, fluorine carriers and mixtures thereof.

28. (New) The process of claim 8 wherein the polyisocyanate solvent is selected from an aromatic solvent, a fatty acid solvent and mixtures thereof.

29. (New) The process of claim 10, wherein the aromatic polyisocyanate is liquid at room temperature.

30. (New) The process of claim 11, wherein the higher homologues comprise polymeric MDI having a functionality of from about 2 to about 4.

31. (New) The process of claim 12, wherein the novolak has a melting point in the range from about 60 to about 120°C.

32. (New) The process of claim 20, wherein the hollow microspheres comprise aluminum silicate.

33. (New) The process of claim 20, wherein the hollow microspheres have an aluminum silicate content greater than about 40% by weight.

34. (New) The process of claim 20, wherein the hollow microspheres have an aluminum silicate content less than about 40% by weight.

35. (New) The process of claim 19, wherein the novolak has a melting point in the range from about 60 to about 120°C.

DISCUSSION OF AMENDMENTS TO CLAIMS

The applicants have amended the claims to put them in better condition for review by the United States Patent and Trademark Office. Principally, the applicant has conformed the claims to USPTO practice. The applicants believe that all claims are now in condition for review.